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EXAMINER	
DANIEL JR, WILLIE J	

ART UNIT	PAPER NUMBER
2686	

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/083,895	BAI, ZHONGZE	
	Examiner	Art Unit	
	Willie J. Daniel, Jr.	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to applicant's amendment filed on 15 February 2005. **Claims 1-29** are now pending in the present application.

Response to Amendment

2. The proposed reply filed on 15 February 2005 indicates another inventor name on the amendment response cover/title sheet. As listed by applicant on the cover/title sheet "Applicant: Gordon Bai", in which the Oath/Declaration has "Zhongze Bai". The Examiner requests clarification. Appropriate correction is required.

Drawings

3. The objections to the drawings are withdrawn, as the proposed drawing corrections are approved.

Claim Objections

4. **Claim 1** recites the limitation "said fixed target" in lines 3-4, 6-7 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Regarding Claim 1 and dependent claims 3, 10, the Examiner requests clarification as whether the applicant is claiming a target unit or a fixed target unit. Applicant has "fixed" (strike-through) in some of the claims (see claims 1-11).

5. **Claim 12** recites the limitation "said signal's" in line14 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Regarding Claim 12, the Examiner requests applicant to be consistent and/or provide clarification (e.g., comments, pages, lines, or drawings) of the distinguishable differences.

6. **Claim 25** recites the limitation "said signal's" in lines 13-14 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Regarding Claim 25, the Examiner requests the applicant to be consistent and/or provide clarification (e.g., comments, pages, lines, or drawings) of the distinguishable differences.

7. This list of examples is not intended to be exhaustive.

8. The objection to the claim 28 is withdrawn, as the proposed claim correction is approved.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 5-8, 10, 12, 14, 16-26, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takahashi et al**. (hereafter Takahashi) (**US 6,097,313**) in view of **Snapp et al**. (hereafter Snapp) (**US 2003/0069693 A1**).

Regarding **Claim 1**, Takahashi discloses a method of directing a driver/vehicle (0108) which reads on the claimed "mobile user" with a vehicle-mounted unit (0201) which reads on the claimed "tracking unit" to at least one of a plurality of road-vehicle communication unit (0106, 0304) which reads on the claimed "target units" in a communication region (0107, P1)

which reads on the claimed "predetermined region", each of said target units (0106, 0304) being installed to represent at least one service provider (0101, 0304) which reads on the claimed "target entity", each of said fixed target units (0106) being adapted to broadcast a predetermined signal representative of said at least one target entity (see col. 8, lines 30-35,57-64; col. 12, lines 1-15; Figs. 1-3, 5-7), the method comprising:

assigning at least one information kind/item (1412, 11) which reads on the claimed "target code" to each of said plurality of fixed target units (0106) to represent at least one target entity (0101) for broadcasting by each fixed target unit (0106) (see col. 10, lines 24-32; col. 8, lines 29-35; col. 14, lines 22-26,54-62; Figs. 4, 15B), where the driver selects the preferred service content provided by the service providers;

selecting which reads on the claimed "entering" at least one target code (1412) to said tracking unit (0201) as said mobile user's (0108) destination (see col. 13, lines 6-17; col. 14, lines 54-65; Figs. 1, 3-4);

receiving at least one beacon which reads on the claimed "broadcast signal" from at least one of said plurality of fixed target units (0106) using said tracking unit (0201) (see col. 10, lines 61-67; col. 8, lines 29-35; Figs. 4, 8-9);

verifying said at least one broadcast signal using said target code (1412) and said tracking unit (0201) (see col. 11, lines 36-42; col. 8, lines 29-35; Figs. 1, 3-7; 15A-D);

if said broadcast signal matches said target code (1412), determining real-time navigation information comprising at least said target unit's (0106) bearing relative to said tracking unit (0201) using said tracking unit (0201) (see col. 11, lines 17-35; col. 13, lines 7-17; col. 13,

line 59 - col. 14, line 9; Figs. 15A-D), where the navigation system (see col. 14, lines 37-39) for checks the information for the destination;

displaying said map information which reads on the claimed "navigation information" using said tracking unit (0201) (see col. 14, lines 37-39; col. 20, lines 36-57; Figs. 15C-D), where the navigation system displays the mapping information. Takahashi fails to disclose having the feature unit to point-to-point detect said broadcast signal's physical direction. However, the examiner maintains that the feature unit to point-to-point detect said broadcast signal's physical direction was well known in the art, as taught by Snapp.

In the same field of endeavor, Snapp discloses the feature unit to point-to-point detect said broadcast signal's physical direction (see pg. 6, [0050, 0074-0076, 0078, 0081, 016]), where the system provides real-time mapping and locating of the target.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takahashi and Snapp to have the feature unit to point-to-point detect said broadcast signal's physical direction, in order to provide a user with data that is unique to that user's interests or preferences with regard to geographic location, as taught by Snapp (see pg. 1, [0012-0013]).

Regarding **Claim 2**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses the method of claim 1, and in which said navigation information comprises distance in real-time between said tracking unit and said broadcast signal's physical origin (see col. 14, lines 37-39; col. 20, lines 16-22, 43-45,52-58; Figs. 15C-D), where the navigation system displays the mapping and distance.

Regarding **Claim 5**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses the method of claim 1, and in which said tracking unit (0201) is installed with mapping software and said tracking unit (0201) is adapted to graphically display the location of said target location relative to said tracking unit (0201) using said mapping software (see col. 20, lines 16-22,35-57; col. 21, lines 25-34; Figs. 6 "ref. 0611", 15C-D, 18).

Regarding **Claim 6**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses the method of claim 1, and in which said tracking unit (0201) is adapted to receive a plurality of signals from said plurality of target units (0106), each of said signals corresponding to said target code (1412) entered by said user (0108) (see col. 13, lines 6-17; col. 10, lines 24-32; col. 14, lines 54-62; Figs. 1-2, 4-5, 8-9), where the service providers of a category can provide information to the vehicle.

Regarding **Claim 7**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses the method of claim 1, and in which said tracking unit (0201) is adapted to receive a plurality of signals from a plurality of target units (0106), corresponding to a plurality of target codes (1412) entered into said tracking unit (0201) (see col. 13, lines 6-17; col. 10, lines 24-32; col. 14, lines 54-62; Figs. 1-2, 4-5, 8-9), where the service providers of a category can provide information to the vehicle.

Regarding **Claim 8**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses the

method of claim 1, and in which said tracking unit (0201) is adapted to graphically display said plurality of target units (0106) (see Figs. 6-7, 15C-D), where the navigation system shows the service providers in an area.

Regarding **Claim 10**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses he method of claim 1, further comprising:

entering an information kind (1412) which reads on the claimed "group code" to said tracking unit (0201), said group code (1412) being representative of a predetermined group of fixed target units (0106) (see col. 13, lines 6-17; col. 14, lines 54-65; Figs. 1, 3-4);

receiving a plurality of broadcast signals from said fixed target unit (0106) using said tracking unit (0201) (see col. 10, lines 61-67; col. 8, lines 29-35; Figs. 4, 8-9);

verifying identity of each of said plurality of broadcast signals using said group code (1412) and said tracking unit (0201) (see col. 11, lines 36-42; col. 8, lines 29-35; Figs. 1, 3-7; 15A-D);

if said signals match said group code (1412), determining a bearing information for each of said predetermined group of target entities (0101) using said tracking unit (0201) (see col. 11, lines 17-35; col. 13, lines 7-17; col. 13, line 59 - col. 14, line 9; Figs. 15A-D), where the navigation system (see col. 14, lines 37-39) for checks the information for the destination in which the bearing information would be inherent;

displaying said map information which reads on the claimed "bearing information" for each of said group of target entities (0101) (see col. 14, lines 37-39; col. 20, lines 36-57; Figs. 15C-D), where the navigation system displays the mapping information.

Regarding **Claim 12**, Takahashi discloses an information exchange system which reads on the claimed "system" for directing a user to locate at least one service provider (0101) which reads on the claimed "target entity" from a plurality of target entities (0101, 0301) (see col. 8, lines 18-29; Figs. 1, 3, 5), comprising:

a plurality of target units (0106) adapted to represent said plurality of target entities (0101), each of said target units (0106) comprising:

a road-vehicle communication unit (0106, 0304) which reads on the claimed "broadcast unit" adapted to broadcast a beacon which reads on the claimed "target signal" representative of a predetermined group of target entities (0101) (see col. 8, lines 18-29; Figs. 1, 3-5, 8-9), where the system provides information of the different service providers in a communication region;

at least one tracking unit (0201), said tracking unit (0201) (see Fig. 2) comprising:

an information input device (0208) which reads on the claimed "data entry unit" adapted to selects which reads on the claimed "enter" at least one target code (1412) entered by said user (0108) (see col. 11, lines 1-25; col. 14, lines 54-62; col. 13, lines 6-17; Figs. 2-4), where the user of the system selects the service provider;

a road-vehicle communication device (0202) which reads on the claimed "receiver unit" adapted to receive at least one target signal from at least one target unit (0301, 0106) and to determine if said target signal matches said target code (1412) entered (see col. 14, lines 54-62; col. 13, lines 6-17; col. 8, lines 18-29; col. 15, lines 20-59; col. 11, lines 36-41; Figs. 2-4, 8-9), where the information content of the service providers is received based on the user selection which is distinguished (filtered);

a vehicle-mounted unit (0201) which reads on the claimed "direction-finding unit" adapted to determine bearing of said target signal by using said direction-finding (0201) (see col. 11, lines 1-25; col. 14, lines 38-39; col. 15, lines 38-45; col. 20, lines 16-22; Figs. 2, 6-7, 15C-D)

if said target signal matches said target code (1412) (see col. 11, lines 1-25; col. 14, lines 38-39; col. 15, lines 38-45; col. 20, lines 16-22; Figs. 2, 6-7, 15C-D);

an information output device (0207) which reads on the claimed "display unit" adapted to display the bearing of said target entity (0101) (see col. 11, lines 1-25; col. 14, lines 38-39; col. 15, lines 38-45; col. 20, lines 16-22; Figs. 2, 6-7, 15C-D). Takahashi fails to disclose having the feature unit to point-to-point detect said signal's physical direction. However, the examiner maintains that the feature unit to point-to-point detect said signal's physical direction was well known in the art, as taught by Snapp.

Snapp further discloses the feature unit to point-to-point detect said signal's physical direction (see pg. 6, [0050, 0074-0076, 0078, 0081, 016]), where the system provides real-time mapping and locating of the target.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takahashi and Snapp to have the feature unit to point-to-point detect said signal's physical direction, in order to provide a user with data that is unique to that user's interests or preferences with regard to geographic location, as taught by Snapp (see pg. 1, [0012-0013]).

Regarding **Claim 14**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 12), in addition Takahashi further discloses the system of claim 12, wherein:

said data entry unit (0208) for said tracking unit (0201) is adapted to receive a plurality of target codes (1412) from said user (0108) (see col. 11, lines 1-25; col. 14, lines 54-62; col. 13, lines 6-17; Figs. 2-4), where the user of the system selects the type of service provider;

said receiver unit (0202) for said tracking unit is adapted to enter a plurality of target signals from a plurality of target units (0301, 0106), and determines whether said plurality of target signals match any of said plurality of pre-loaded target codes (1412) (see col. 14, lines 54-62; col. 13, lines 6-17; col. 8, lines 18-29; col. 15, lines 20-59; col. 11, lines 36-41; Figs. 2-4, 8-10), where the information content of the service providers is received based on the user selection which is distinguished (filtered);

said direction-finding unit (0201) is adapted to determine bearings of target signals matching said target codes (1412) (see col. 11, lines 1-25; col. 14, lines 38-39; col. 15, lines 38-45; col. 20, lines 16-22; Figs. 2, 6-7, 15C-D);

said display unit (0207) is adapted to display all bearings of said plurality of target units (0106) (see col. 11, lines 1-25; col. 14, lines 38-39; col. 15, lines 38-45,54-59; col. 20, lines 16-22; Figs. 2, 6-10, 15C-D).

Regarding **Claim 16**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 12), in addition Takahashi further discloses the system of claim 12, wherein each of said target units (0106) is adapted to support a

plurality of target entities (0101, 0102, 0103) within a predetermined range (see col. 10, lines 15-39; Figs. 1, 3, 5).

Regarding **Claim 17**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 16), in addition Takahashi further discloses the system of claim 16, wherein said broadcast unit (0106) is adapted to broadcast a target signal comprising a plurality strings (0401) of descriptive codes (1412), each of said strings (0401) identifying at least one of a plurality of target entities (0101, 0301) supported by said target units (0106) (see Figs. 1, 3-7, 15A-D).

Regarding **Claim 18**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 17), in addition Takahashi further discloses the system of claim 17, wherein:

said direction-finding unit (0201) is adapted to determine one of bearing with distance and bearing without distance of a plurality of target signals (see col. 11, lines 1-25; Figs. 2, 6 "0611", 7 "0711"), where Fig. 6 shows the map display with distance information and direction to service provider and Fig. 7 shows the map display without distance information;

said display unit (0207) is adapted to display said one of bearing with distance and bearing without distance of said plurality of target units (see col. 11, lines 1-25; Figs. 2, 6 "0611", 7 "0711"), where Fig. 6 shows the map display with distance information and direction to service provider and Fig. 7 shows the map display without distance information;

Regarding **Claim 19**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses the method of claim 1, wherein said tracking units (0201) is pre-loaded with a plurality of

classification codes (0401) and specific target codes (1412), wherein every entity (0101) belongs to at least one of said classification codes, wherein said specific target codes (1412) are assigned based on a set of predetermined services which reads on the claimed "criteria" (see col. 10, lines 24-39; col. 13, lines 6-11; col. 14, lines 54-60; Fig. 4), where the service providers are in categories based on the service provided.

Regarding **Claim 20**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 19), in addition Takahashi further Takahashi discloses the method of claim 19, wherein said set of predetermined criteria comprises perquisites which reads on the claimed "payment of fees" (see col. 10, lines 36-46; col. 15, lines 58-66).

Regarding **Claim 21**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further Takahashi discloses the method of claim 1, wherein said broadcast signals of said target unit (0106) combines target code (1412) with live messages, said live messages adapted to be displayed by said tracking unit (0201) to show information provided by said target entity (0101) (see col. 14, lines 22-26; col. 15, lines 38-45; col. 15, line 60 - col. 16, line 5; Figs. 2, 4, 6-7).

Regarding **Claim 22**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses the method of claim 1, wherein said at least one broadcast signals comprise information from said plurality of target entities (0101, 0102, 0301) (see col. 14, lines 22-26; col. 15, lines 38-45; col. 15, line 60 - col. 16, line 5; Figs. 1, 4, 6-10).

Regarding **Claim 23**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses the method of claim 1, wherein said step of displaying comprises at least one of the following:

displaying of routing to said target location using north, south, west and east pointers (see col. 14, lines 38-39; Figs. 6 "ref. 0611", 7 "0711", 15C-D), where the navigation system has map information that shows the heading direction arrow on the display (0207);

displaying of a destination spot relative to the current position which reads on the claimed "present location" (see Fig. 15C-D);

displaying of turning direction (see col. 14, lines 38-39; col. 20, lines 16-22,53-58; Figs. 6 "ref. 0611", 7 "0711", 15C-D), where the navigation system has map information that shows the heading direction arrow on the display (0207) in which the turning direction would be inherent;

displaying of distance to destination by varying color, intensity, size or numbers (see col. 21, lines 25-34; Fig. 7 "0711").

Regarding **Claim 24**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 12), in addition Takahashi further discloses the method of claim 12, wherein said at least one broadcast signal comprises information content which reads on the claimed "data massages" corresponding to said target entities (0101) (see col. 13, lines 59-61; col. 14, lines 54-62; Figs. 4, 6-10).

Regarding **Claim 25**, Takahashi discloses a information exchange system which reads on the claimed "system" for a direction finding network for a plurality of target

locations (0101, 0102, 0301) within a communication region (P1) which reads on the claimed "predetermined geographic region" (see Figs. 1, 3, 5-7, 10, 15C-D), comprising:

a plurality of target transmitters (0106), each of said plurality of target transmitter (0106) being adapted to broadcast a guiding signal comprising location information of at least one of said target locations (0101) and of said target transmitter (0106) (see col. 20, lines 16-22; Figs. 1, 3, 5-7, 15C-D);

a plurality of tracking unit (0201), each tracking unit (0201) (see Fig. 2)comprising:

a data entry unit (0208) adapted to enter a target code (1412) entered by a user (0108) (see col. 11, lines 1-25; col. 14, lines 54-62; col. 13, lines 6-17; Figs. 2-4), where the user of the system selects the type of service provider;

a receiver unit (0202) adapted to receive said guiding signals from said target transmitters (0106) and to determine if one of said plurality of guiding signals matches said target code (1412) (see col. 14, lines 54-62; col. 13, lines 6-17; col. 8, lines 18-29; col. 15, lines 20-59; col. 11, lines 36-41; Figs. 1-10), where the information content of the service providers is received based on the user selection which is distinguished (filtered);

a direction-finding unit (0201) adapted to determine map information which reads on the claimed "bearing information" of a target location (0101) by using said direction-finding unit (see col. 11, lines 1-25; col. 14, lines 38-39; col. 15, lines 38-45; col. 20, lines 16-22; Figs. 2, 5-7, 15C-D), where the navigation system provides mapping information to the selected service provider,

upon a match between said target code (1412) and one of said guiding signals, based on location information of said target location (0101) and of said transmitter (1412) (see col. 11,

lines 1-25; col. 14, lines 38-39; col. 15, lines 38-45; col. 20, lines 16-22; Figs. 2, 5-7, 15C-D), where the navigation system provides mapping information to the selected service provider;

a display unit (0207) adapted to graphically display the bearing of said target location (0101) (see col. 11, lines 1-25; col. 14, lines 38-39; col. 15, lines 38-45,54-59; col. 20, lines 16-22; Figs. 2, 6-10, 15C-D). Takahashi fails to disclose having the feature unit to point-to-point detect said signal's direction. However, the examiner maintains that the feature unit to point-to-point detect said signal's direction was well known in the art, as taught by Snapp.

Snapp further discloses the feature unit to point-to-point detect said signal's direction (see pg. 6, [0050, 0074-0076, 0078, 0081, 016]), where the system provides real-time mapping and locating of the target.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takahashi and Snapp to have the feature unit to point-to-point detect said signal's direction, in order to provide a user with data that is unique to that user's interests or preferences with regard to geographic location, as taught by Snapp (see pg. 1, [0012-0013]).

Regarding **Claim 26**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses the method of claim 1, wherein said target code (1412) comprises at least one of the following:

at least one classification code (see col.14, lines 54-62; col. 15, lines 20-45; Figs. 4, 15A-D);

at least one descriptive code (see col.14, lines 54-62; col. 15, lines 20-45; Figs. 4, 15A-D);

at least one specific location code (see col.14, lines 54-62; col. 15, lines 20-45; Figs. 4, 15A-D);

at least one business name code (see col.14, lines 54-62; col. 15, lines 20-45; Figs. 4, 15A-D).

Regarding **Claim 29**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 12), in addition Takahashi further discloses the system of claim 12, wherein at least one of said target signals combines a target code (1412) with live messages, said live messages adapted to be displayed by said tracking unit (0201) to show information provided by a target entity (0101) associated with said target code (1412) (see col. 14, lines 22-26; col. 15, lines 38-45; col. 15, line 60 - col. 16, line 5; Figs. 2, 4, 6-7).

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takahashi et al.** (hereafter Takahashi) (**US 6,097,313**) in view of **Snapp et al.** (hereafter Snapp) (**US 2003/0069693 A1**) as applied to claim 1 above, and further in view of **Durst et al.** (hereinafter Durst) (**US 6,480,147 B2**) and **Neher (US 6,388,612 B1)**.

Regarding **Claim 3**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses tracking unit (0201) is adapted to broadcast an information item (e.g., via beacon) which reads on the claimed "wake-up signal" (see col. 11, lines 48-59; Figs. 1-2,8-9), where the

system has road-vehicle communication unit (0106) that is a fixed target to provide information of the service provider. Takahashi fails to disclose having the features in which said fixed target unit is adapted to vary its frequency of transmission based on predetermined criteria; in which said in which said fixed target unit, upon receiving said wake-up signal, is adapted to broadcast said predetermined signal. However, the examiner maintains that the feature in which said fixed target unit is adapted to vary its frequency of transmission based on predetermined criteria was well known in the art, as taught by Durst.

In the same field of endeavor, Durst discloses the feature in which said object locator (42, 500) which reads on the claimed "fixed target unit" is adapted to vary its frequency of transmission based on predetermined criteria (see col. 10, lines 22-25), where the periodically transmit location coordinates. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takahashi, Snapp, and Durst to have the feature in which said fixed target unit is adapted to vary its frequency of transmission based on predetermined criteria, in order to locate or track an individual, object, or animal, as taught by Durst (see col. 4, lines 11-14). The combination of Takahashi, Snapp, and Durst fails to disclose having the feature in which said in which said fixed target unit, upon receiving said wake-up signal, is adapted to broadcast said predetermined signal. However, the examiner maintains that the feature in which said in which said fixed target unit, upon receiving said wake-up signal, is adapted to broadcast said predetermined signal was well known in the art, as taught by Neher.

In the same field of endeavor, Neher discloses the feature in which said in which said tracking unit (104) which reads on the claimed "fixed target unit", upon receiving said wake-

up signal, is adapted to broadcast said response signal (132) which reads on the "predetermined signal" (see col. 9, line 67 - col. 10, line 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takahashi, Snapp, and Durst with Neher to have the feature in which said in which said fixed target unit, upon receiving said wake-up signal, is adapted to broadcast said predetermined signal, in order to have a system which is able to locate individuals or personal property anywhere around the world, as taught by Neher (see col. 12, lines 32-34).

Regarding **Claim 4**, the combination of Takahashi, Snapp, Durst, and Neher discloses every limitation claimed, as applied above (see claim 3), in addition Takahashi further discloses the feature in which said fixed target unit (0106) is adapted to transmit a signal carrying a plurality of codes (1412), each code (1412) being representative of a predetermined target entity (0101) (see col. 13, line 59 - col. 14, line 9; col. 14, lines 54-60; col. 9, lines 10-17; Fig. 4), where the information kind (code) provides information of the related service providers.

Claims 9, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takahashi et al**. (hereafter Takahashi) (**US 6,097,313**) in view of **Snapp et al**. (hereafter Snapp) (**US 2003/0069693 A1**) as applied to claims 1 and 12 above, and further in view of well known prior art (**MPEP 2144.03**).

Regarding **Claim 9**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 1), in addition Takahashi further discloses

said tracking unit (0201) and said fixed target units (0106. Takahashi fails to disclose the feature jointly determine a better frequency to communicate. However, the examiner takes official notice of the fact that it was well known in the art to jointly determine a better frequency to communicate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takahashi by specifically jointly determine a better frequency to communicate, for the purpose of communicating between the road-vehicle communication device and the vehicle-mounted unit (0201) (see col. 10, lines 61-64).

Regarding **Claim 15**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 12), in addition Takahashi further discloses said tracking unit (0201) and said fixed target units (0106. Takahashi fails to disclose the feature jointly determine a more appropriate frequency for communication based on predetermined quality criteria. However, the examiner takes official notice of the fact that it was well known in the art to jointly determine a more appropriate frequency for communication based on predetermined quality criteria.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takahashi by specifically jointly determine a more appropriate frequency for communication based on predetermined quality criteria, for the purpose of communicating between the road-vehicle communication device and the vehicle-mounted unit (0201) (see col. 10, lines 61-64).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Takahashi et al.** (hereafter Takahashi) (**US 6,097,313**) in view of **Snapp et al.** (hereafter Snapp) (**US 2003/0069693 A1**) as applied to claim 10 above, and further in view of **Meadows et al.** (hereinafter Meadows) (**US 6,716,101 B1**).

Regarding **Claim 11**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 10), in addition Takahashi further discloses the feature displaying said bearing information for said target entity (0201) (see col. 14, lines 37-39; col. 15, lines 36-45; col. 20, lines 36-57; Figs. 2 "ref. 0207", 6-7,15C-D), where the navigation system displays the mapping information on the display screen (information output device 0207) (see col. 13, lines 10-11). Takahashi fails to disclose having the feature entering a second code, representative of one target entity within said predetermined group of target entities. However, the examiner maintains that the feature entering a second code, representative of one target entity within said predetermined group of target entities was well known in the art, as taught by Meadows.

In the same field of endeavor, Meadows discloses the feature entering a second code, representative of one wireless device (10, individual) which reads on the claimed "target entity" within said list which reads on the claimed "predetermined group of target entities" (see col. 3, lines 42-47; col. 5, line 42 - col. 6, line 22; Figs. 1, 4a-b, 5a-b).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takahashi, Snapp, and Meadows to have the feature entering a second code, representative of one target entity within said

predetermined group of target entities, in order to track the location of wireless devices, as taught by Meadows (see col. 3, lines 42-43).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Takahashi et al.** (hereafter Takahashi) (**US 6,097,313**) in view of **Snapp et al.** (hereafter Snapp) (**US 2003/0069693 A1**) as applied to claim 12 above, and further in view of **Neher** (**US 6,388,612 B1**).

Regarding **Claim 13**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 12), in addition Takahashi further discloses said tracking unit (0201) further comprises:

a transmitter unit adapted to transmit an information item (e.g., via beacon) which reads on the claimed "wake-up signal" to said target unit (0301, 0106) (see col. 11, lines 48-59; Figs. 1-2,8-9), where the system has road-vehicle communication unit (0106) that is a fixed target to provide information of the service provider. Takahashi fails to disclose having the feature said target unit further comprises: a receiver unit adapted to receive a wake-up signal, said wake-up signal activating said target unit. However, the examiner maintains that the feature said target unit further comprises: a receiver unit adapted to receive a wake-up signal, said wake-up signal activating said target unit was well known in the art, as taught by Neher.

Neher further discloses the feature said tracking unit (0104) which reads on the claimed "target unit" further comprises: a cellular pager receiver (142) which reads on the claimed "receiver unit" adapted to receive a request signal which reads on the claimed

"wake-up signal", said wake-up signal activating said target unit (104) (see col. 9, line 67 - col. 10, line 5; Fig. 9), where the tracking unit is awaken upon receiving the request.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takahashi, Snapp, and Neher to have the feature said target unit further comprises: a receiver unit adapted to receive a wake-up signal, said wake-up signal activating said target unit, in order to have a system which is able to locate individuals or personal property anywhere around the world, as taught by Neher (see col. 12, lines 32-34).

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Takahashi et al**. (hereafter Takahashi) (**US 6,097,313**) in view of **Snapp et al**. (hereafter Snapp) (**US 2003/0069693 A1**) as applied to claim 25 above, and further in view of Kennedy et al. (hereinafter Kennedy) (US 6,535,743 B1).

Regarding **Claim 27**, the combination of Takahashi and Snapp discloses every limitation claimed, as applied above (see claim 25), in addition Takahashi further discloses the system of claim 25, wherein at least one of said transmitters (0106) is deployed (hereinafter "LFS") to represent a plurality of target locations (0101) (see Figs. 1, 3, 5-7),

wherein said LFS (0104) is programmed to store information about the positions of its represented target locations (0101) and to send multiple signals to represent all those target locations (0101) (see col. 10, lines 19-32; col. 11, lines 34-44; Figs. 1, 3, 5-7),

wherein when said tracking unit (0201) searches any one of these target locations (0101) (see col. 14, lines 38-39,54-62; col. 15, lines 20-45; Fig. 1, 3-7, 15B-D),

said tracking unit (0201) communicates with said LFS (0106). Takahashi fails to disclose having the feature to use the latitude and longitude information" for both said LFS and target location to triangulate the bearing and distance between said tracking unit and the target location. However, the examiner maintains that the feature to use the latitude and longitude information for both said LFS and target location to triangulate the bearing and distance between said tracking unit and the target location was well known in the art, as taught by Kennedy.

In the same field of endeavor, Kennedy discloses the feature to use the coordinates which reads on the claimed "latitude and longitude information" for both said GPS device (48) which reads on the claimed "LFS" and destination location (e.g., restaurant) which reads on the claimed "target location" to triangulate the bearing and distance between said mobile unit (12) which reads on the claimed "tracking unit" and the target location (e.g., restaurant) (see col. 6, lines 23-32; col. 17, line 6-48; col. 18, lines 11-23; Fig. 1), where the system uses a positioning technique such as triangulation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takahashi, Snapp, and Kennedy to have the feature to use the latitude and longitude information for both said LFS and target location to triangulate the bearing and distance between said tracking unit and the target location, in order to provide directions from an origination location to a destination location, as taught by Kennedy (see col. 1, lines 53-56).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Takahashi et al.** (hereafter Takahashi) (**US 6,097,313**) in view of **Snapp et al.** (hereafter Snapp) (**US 2003/0069693 A1**) and **Kennedy et al.** (hereinafter **Kennedy**) (**US 6,535,743 B1**) as applied to claim 27 above, and further in view of **Cox et al.** (hereinafter Cox) (**US 2003/0216145 A1**).

Regarding **Claim 28**, the combination of Takahashi, Snapp, and Kennedy discloses every limitation claimed, as applied above (see claim 27), in addition Takahashi further discloses the system of claim 27, wherein a plurality of LFS's (0106) are installed and networked together to represent a plurality of communication regions (P1) which reads on the claimed "cell regions" (see col. 14, lines 38-39; Figs. 1, 3, 5-7), where the navigation system provides mapping information,

uses said networked LFS's (0106) to navigate all location where this networked LFS (0106) is deployed (see col. 14, lines 38-39; Figs. 1, 3, 5-7, 15C-D), where the navigation system provides mapping information.

wherein said tracking unit is directed to a target location which is not in a first cell region by using hand-off by one a first LFS to a second LFS from a first cell region to a second cell region, such that said tracking unit. The combination of Takahashi and Cox fails to disclose having the feature wherein said tracking unit is directed to a target location which is not in a first cell region by using hand-off by one a first LFS to a second LFS from a first cell region to a second cell region, such that said tracking unit. However, the examiner maintains that the feature wherein said tracking unit is directed to a target location which is not in a first cell

region by using hand-off by one a first LFS to a second LFS from a first cell region to a second cell region, such that said tracking unit was well known in the art, as taught by Cox.

In the same field of endeavor, Cox discloses the feature wherein said user (10) which reads on the claimed "tracking unit" is directed to a target location (22) which is not in a first cell region (44a) by using hand-off by one a first LFS (44a) to a second LFS (44b) from a first cell region (44a) to a second cell region (44b), such that said tracking unit (see pg. 3, [0028, 0031]; Figs. 1, 4A "ref. 144"), where the user is handed off between cells and the driving directions and trip information is segmented.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Takahashi, Snapp, and Kennedy with Cox to have the feature wherein said tracking unit is directed to a target location which is not in a first cell region by using hand-off by one a first LFS to a second LFS from a first cell region to a second cell region, such that said tracking unit, in order to obtain directional assistance, as taught by Cox (see pg. 3, [0025]).

Response to Arguments

10. Applicant's arguments filed 15 February 2005 have been fully considered but they are not persuasive.

Examiner respectfully disagrees with applicant's arguments as the applied reference(s) provide more than adequate support and to further clarify (see the above claims and comments in this section).

11. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "without the use of the complicated GPS systems"; see Remarks - pg. 10, 6th paragraph) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. Regarding applicant's argument of claims 9 and 15 on pg. 12, 1st paragraph, "Takahashi...not capable...real-time point-to-point navigation guidance", the Examiner respectfully disagrees. The applicant's argument is based on the amendment included in the response to non-final (mailed 15 November 2004). As additional support, Takahashi discloses a vehicle unit receiving a transmitted communication (e.g., beacon signal) from a service provider (see col. 8, lines 13-35; Figs. 1-2), where a communication device can receive a communication signal from another communication device. In a situation where the received signal condition changes such as degradation, weakens, poor quality, etc., the communication device can change frequency, increase, scan channels, etc. to obtain a better

signal level. As additional support, the Examiner request applicant view prior art Grebnev et al. (US 5,796,366) (see col. 4, lines 35-41; abstract; Figs. 4-5).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

    a. Grebnev et al. (US 5,796,366) discloses "Method Of And Apparatus For Position Location And Tracking Of A Vehicle Or The Like By the Reception At the Vehicle of Pulsed Radio Navigation Signals As Of The LORAN-OC Type And The Like, With An Autonomous Loop Antenna-Receiver".

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (571) 272-7907. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJD,JR
14 July 2005

CHARLES APPIAH
PRIMARY EXAMINER